

Canadian Meteorological and Oceanographic Society

La Societe Canadienne de Meteorologie et d Oceanographie

c.m.o.s. NEWSLETTER / NOUVELLES s.c.m.o.

OCTOBER/OCTOBRE

1986

VOL. 14 NO. 5

News From CMOS Headquarters

Move to a New Suite Number. The move of the CMOS office, together with that of the Canadian Association of Physicists (CAP) which carries out most of the administrative functions for CMOS, to a slightly larger office has now been completed. As notified in the previous issue of the Newsletter, the new suite number is "903".

New Stationery. A new supply of stationery has been printed with the new logo of the Society (incorporating the maple leaf) and the new suite number. A supply of this stationery is being sent to all CMOS officers likely to be needing it. Anyone requiring stationery who has not received it or requires more should contact the CMOS office.

Membership List. The August Newsletter (Vol. 14, No. 4) contained a Membership List which members may wish to keep for reference. Members finding mistakes or omissions are invited to inform the CMOS office in writing so that we can improve our records.

Executive Director

National Climate Data and Applications Committee

The yearly meeting of this Committee took place on October 2, 1986 in Ottawa. The Committee, is composed of is chaired by AES, provincial Climate Advisory representatives of Committees and of various interested government departments. Private industry and universities are also represented. Items discussed included the establishment of Climate Service Centres by provincial advisory committees, the holding by the Department of the Environment and the Department of Indian and Northern Affairs of a joint Workshop in Climate Change Impact in the North, and the status of various climate impact studies completed or being carried out by the Canadian Climate Program.

The CMOS Executive Director, who attended the meeting, outlined Society activities, emphasizing those of likely interest to Committee members, such as the good progress of the Climatological Bulletin

(which often carries news about Climate Advisory Committee activities) and plans for the next Congress. He also distributed sample copies of CMOS publications.

CANADIANS IN THE WORLD CLIMATE RESEARCH PROGRAMME

The WMO/ICSU World Climate Resarch Programme is moving ahead with the Tropical Oceans and Global Atmosphere (TOGA) Programme into its second year and the International Satellite Cloud Climatology Programme continuing. Recently the first informal Intergovernmental Planning Meeting was held in Geneva (May 12-16, 1986). About 25 nations were represented and considerable progress was made towards establishing the other components of the WCRP. P.J. Pender, Canadian Climate Centre, Downsview and Dr. C.R. Mann, Institute of Ocean Sciences, Sidney, were the Canadian representatives.

Many Canadian scientists have played a role in developing the plans for the SCRP. Dr. G.A. McBean, AES, Sidney, has been a member of the Joint Scientific Committee (JSC) for the WCRP since April 1984 and was recently elected Vice-Chairman of the Working Group on Numerical Experimentation and Dr. J.F.R. Gower, IOS, Sidney, is a member of the Working Group on Satellite Observing Systems for Climate Research. Dr. McBean is also a member of the JSC's Scientific Steering Groups on Sea and Climate and Land Surface Processes and Climate. AES, Downsview is the GOES-E sector processing centre for the ISCCP.

The oceanographic components of the WCRP are primarily the responsibility of the IOS/SCOR Committee on Climate Changes and the Oceans (CCCO). Dr. R.W. Stewart of the Alberta Research Council is the Chairman of CCCO. Dr. G.T. Needler of BIO has been appointed the Director of the WOCE International Project Office, now established at IOS, Wormley, United Kingdom. Dr. A. Longhurst of BIO is the CCO Biological Aspects rapporteur. Numerous other scientists have been active at expert meetings, in committees or as consultants.

Call for Nominations

The Canadian Meteorological and Oceanographic Society established the Prizes and Awards Committee to focus attention on the achievements of its members and their influence on the sciences of meteorology and oceanography in Canada.

This is the time of year when nominations are called for the various award and prize categories in our society. As a respected and distinguished individual in your field, I am requesting your cooperation in identifying individuals for whom an award or prize would be appropriate.

Outstanding achievers in the fields of oceanography and or meteorology should be recognized by their CMOS peers and members of the Canadian community. This awards program is important to CMOS as it brings credit and recognition to those who deserve it.

Please give serious consideration to this request. A list of the various awards follows for your reference. Please note the established and approved criteria for each award or prize. It is essential that your written recommendation for a particular award be supported by complete documentation, illustrating that the candidate has met all the prize requirements.

The deadline for nominations to be received by the Secretary of the Prizes and Awards Committee, complete with supporting documentation, by Friday 30 January 1987. The address to which nominations should be sent is;

J. B. Merrick Secretary Prizes and Awards Committee c/o Maritimes Weather Centre 1496 Bedford Highway Bedford, Nova Scotia B4A 1E5

Canadian Meteorological and Oceanographic Society

Prizes and Awards Criteria

The following is extracted from the bylaws of the Society.

a) PRESIDENT'S PRIZE

May be awarded each year to an individual or individuals for a recent paper of special merit in the fields of meteorology or oceanography. The paper MUST have been:

- published in Atmosphere-Ocean or have been presented to the Society membership at a national or local meeting, AND,
- have been accepted for publication in a refereed journal.

b) THE DR ANDREW THOMPSON PRIZE IN APPLIED METEOROLOGY

May be awarded for an outstanding contribution in the field of applied meteorology. The nominee must be a member of the Society.

c) GRADUATE STUDENT PRIZES

May be awarded for contributions of special merit in meteorology and/or oceanography by graduate students.

d) THE RUBE HORNSTEIN PRIZE IN OPERATIONAL METROROLOGY

May be awarded to an individual for providing outstanding operational meteorological service in its broadest sense, but excluding the publication of research papers as a factor, unless that research is already incorporated as an aid in the day-by-day performance of operational duties. The work for which the prize is granted may be cumulative over a period of years or may be a single notable achievement.

e) PRIZE IN APPLIED OCEANOGRAPHY

May be awarded for a significant contribution to the application of oceanography in Canada. The nominee must be a member of the Society.

f) THE J.P. TULLEY MEDAL IN OCEANOGRAPHY

May be awarded to a person whose scientific contributions have had a significant impact on Canadian Oceanography.

g) CITATIONS

May be awarded to individuals or groups who have in the previous year, made some outstanding contribution in helping to alleviate pollution problems, in promoting environmental improvements, or in developing environmental ethics.

MISSING MEMBERS

The following members have not given us their complete addresses and as a result may not be receiving mail on publications to which they are entitled. If you see the name of someone you know in the following list please suggest that they send their complete name and address to:

CMOS - SCMO SUITE 903 151 SLATER ST. OTTAWA, ONTARIO, CANADA K1P 5H3

JOHN CRISWICK CHRIS FUNG NGOC DIEP TRAT RICHARD KELVIN DEWEY YVES PELLETIER A. WALTON

CALL FOR PAPERS 21st Annual Congress Canadian Meteorological and Oceanographic Society

The Newfoundland Centre of the Canadian Meteorological and Oceanographic Society (CMOS) will host the Twenty-first Annual CMOS Congress during 16-19 June 1987 on the campus of Memorial University in St. John's, Newfoundland. The theme is Predictability in the Atmosphere and the Ocean. The theme sessions will include: (a) Climatology, Numerical Weather Forecasting, Dynamic Meteorology and Operational Meteorology; (b) Coastal Oceanography, Deep Sea Oceanography, Sea Ice and Prediction in Biological and Icebergs, Oceanographic Systems; and (c) Atmosphere-Ocean Coupling, the Canadian Atlantic Storms Project (CASP), Dispersal of Tracers in the Atmosphere and the Ocean; and the Chemistry of the Atmosphere and the Ocean. Special sessions will include Mesoscale and Boundary Layer Meteorology, Polar Oceanography and Meteorology, Labrador Current Oceanography, Limnology, and Acoustical Oceanography, plus others as appropriate. Contributions are sought on these topics, and any other topic in meteorology and oceanography.

Abstracts will be received until 1 February 1987 and should be sent to Dr. Alex E. Hay, Department of Physics, Memorial University of Newfoundland, St. John's, Newfoundland, A1B 3X7; telephone (709) 737-8888. Each abstract, not to exceed 300 words, is to be typed single spaced on a sheet of 216 mm by 279 mm (8.5 inches by 11 inches) paper with 25 mm margins. Clean, camera-ready copy with black type is required. Elite type (12 pitch) is preferred. The heading block should consist of the following items on successive lines:

- a) THE TITLE IN UPPER CASE LETTERS
- b) The Name(s) of the Author(s) in Upper and Lower Case Letters, followed by the mailing address of the first author.

There should be a one-line space between the heading block and text. All lines, including the title, names and text, are to be typed left justified. Poster sessions may be held depending on contributions. Speakers who prefer to give a poster presentation should so indicate. In an accompanying covering letter, the authors should give their affiliation as they would like it to appear in the program and abstracts volume that will be published for the Congress.

For further information, contact the chairperson of the Local Arrangements Committee, Dr. Brian G. Sanderson, CMOS Conference, Department of Physics, Memorial University of Newfoundland, St. John's, Newfoundland, AlB 3X7; telephone (709) 737-8523.

INVITATION A PRESENTER DES COMMUNICATIONS 21'ème congrès annuel 1987 La Société canadienne de météorologie et d'océanographie

Le Centre de Terre - Neuve de la Société canadienne de méteorologie et d'océanographie (SCMO) sera l'hôte du vingt-et unième congrès annuel de la SCMO , du 16 au 19 juin 1987, qui aura lieu au campus de l'université de Mémorial à St. John's, Terre Neuve. Le congrès aura pour thème La prédictabilité dans l'atmosphère et l'océan. Les sessions thématiques porteront sur: (a) climatologie, la prévision numérique, la météorologie dynamique, et la météorologie opérationnelle; (b) l'océanographie côtière, l'océanographie des grands fonds, la glace de mer, les icebergs, la prévision dans les systèmes biologiques en océanographie; et (c) le couplage entre l'atmosphere et la mer, le Programme Canadien d'études des Tempêtes dans l'Atlantique, la dispersion des traceurs dans l'atmosphère et l'océan, et la chimie de l'atmosphére et de l'océan. Les sessions spéciales traiteront de: la météorologie de la méso-échelle, la météorologie de la couche limite, l'océanographie du courant du Labrador, la limmologie, l'océanographie acoustique, et d'autres sujets selon les besoins. On demande des communications portant sur ces sujets, et/ou tout autres sujets reliés à la météorologie et l'océanographie.

Pour le Congrès de la SMCO, la date limite de réception des résumés est le ler février 1987. Ceux-ci doivent être adressés au M. Alex Hay, Department of Physics, Memorial University of Newfoundland, St. John's, Newfoundland, AlB 3X7; numéro de téléphone (709) 737-8888. Chaque résumé ne doit pas dépasser 300 mots et doit être dactylographié à l'encre noire à interligne simple sur une feuille de 216 mm par 279 mm (8.5 pouces par 11 pouces) ayant une marge de 25 mm (1 pouce). La copie doit être propre et prête à photocopier. L'utilisation du caractère élite (12 charactères au pouce) est préférable. L'en-tête doit contenir les renseignements suivants sur des lignes successives:

- a) LE TITRE EN LETTRES MAJUSCULES
- b) le Nom de l'Auteur en Lettres Majuscules et Minuscules, suivi de l'addresse postale du premier auteur.

On doit laisser un espace d'un interligne simple entre l'entête et le texte. Toutes les lignes, incluant le titre, le nom, et le texte, doivent commencer à la marge. Des sessions d'affichage pourront avoir lieu en fonction de la participation: les personnes intéressées doivent en faire mention. Les auteurs doivent inclure, dans une lettre jointe à leurs documents, leur affiliation telle qu'ils voudraient qu'elle apparaisse dans la publication "Programme et Résumés" qui sera publiée.

Pour de plus amples renseignements veuillez contacter le président de comité des arrangements locaux, M. Brian Sanderson, Conférence de la SMCO, Memorial University of Newfoundland, St. John,s, Newfoundland, AlB 3X7; numéro de téléphone (709) 737-8523. Second Workshop on Operational Meteorology October 14-16, 1987 Halifax, Nova Scotia Canada.

The Second Workshop' on Operational Meteorology, sponsored by the Atmospheric Environment Service of Environment Canada and the Canadian Meteorological and Oceanographic Society, will be held October 14-16,1987 in Halifax, Nova Scotia. The theme for the workshop will be marine meteorology, although a number of other topics in operational meteorology will be included.

The Program Committee wishes to solicit papers on the following topics: 1) marine meteorology including near shore forecasting problems, cyclogenesis, and forecasting marine elements; 2) mesoscale meteorology; 3) local forecast problems; 4) data acquisition including remote sensing; 5) nowcasting and forecast tailoring; 6) data management, analysis and display systems; 7) verification and 8) using weather services. Appropriate studies using datasets from the Canadian Atlantic Storms Program (CASP) or the Genesis of Atlantic Lows Experiment (GALE) are anticipated.

The format will consist of submitted papers, invited papers, panel discussions, and laboratory sessions. In addition, a poster session is planned for the evening of October 14.

Titles and abstracts of 200-400 words should be sent by March 31, 1987 to the Program Chairman, J.D. Abraham, Maritimes Weather Centre, 6th Floor 1496 Bedford Highway, Bedford, Nova Scotia Canada B4A 1E5. Authors should indicate their preference for presenting their paper orally in a regular session or in a poster session. Preferences will be considered to the extent possible. Abstracts will be evaluated on their relevance to operational meteorology and weather services, as well as on their quality.

Authors will be notified by May 1, 1987 regarding acceptance of their abstracts, and furnished with instructions on the format of the papers.

Complete camera-ready papers of no more than 8 pages, including diagrams, must be received by the program chairman no later than July 31, 1987. A preprint volume will be prepared and distributed to workshop registrants. Papers and abstracts may be in either English or French.

Canadian National Hydrology Research Centre Opened

The National Hydrology Research Centre was opened at Saskatoon earlier this year. It is comprised of components from the National Hydrology Research Institute, National Water Research Institute, the Water Quality Branch and the Atmospheric Environment Service and will cover the fields of surface water, groundwater, limnology and water quality. Mr. Rick Lawford is in charge of the Atmospheric Environment Service component.

ARTICLES DEMANDES

Deuxième atelier de travail sur la météorologie opérationelle, 14-16 octobre 1987, Halifax, Nouvelle-Ecosse.

Le deuxième atelier de travail sur la météorologie opérationelle, supporte par le Service de l'environnement atmosphérique d'Environnement Canada et la Société canadienne de météorologie et d'océanographie, aura lieu à Halifax du 14 au 16 octobre 1987. Le thème de l'atelier sera la météorologie maritime, cependant plusieurs autres sujets en météorologie opérationellelle seront inclus.

Le comité responsable du programme est à la recherche d'articles sur les sujets suivants:

- la météorologie maritime incluant les problèmes de prévision le long du littoral, cyclogénèse, et la prévision des éléments maritimes;
- 2) météorologie à la méso-échelle;
- 3) problèmes locaux en prevision;
- acquisition des données comprenant la télédétection;
- 5) prévision à court terme;
- 6) vérification
- organisation des données, systèmes d'analyses et d'affichage des données;
- 8) utilisation des services météorologiques.

Des articles appropriés qui se servent des données du Programme canadien d'étude des tempêtes dans l'Atlantique (CASP) ou de l'Expérience de la genêse des dépressions dans l'Atlantique (GALE) sont attendus.

L'atelier sera sous forme de présentations d'articles soumis par les participants et par quelques conférenciers invités, des sessions de table-ronde et de laboratoire.

En plus, une session d'affichage est planifiée pour la soirée du 14 octobre.

Le résumé (incluant le titre) d'une longueur de 200 à 400 mots devra être envoyé pour le 31 mars, 1987 au président du programme, J.D. Abraham Centre Météorologique des Maritimes, 6ième étage 1496, Bedford Highway, Bedford Nouvelle-Ecosse, Canada B4A 1E5. Les auteurs devront indiquer leurs préférences pour faire leurs présentations oralement lors d'une session régulière ou lors d'une session d'affichage. Les préférences seront respectées dans la mesure du possible. Les résumés seront évalués selon leur rapport avec la météorologie opérationnelle et leur qualité.

Les auteurs seront avisés le ler mai 1987 de l'acceptation de leurs articles et des instructions du format requis leur seront fournis.

Les articles prêts à être photographier ne devront pas excéder 8 pages incluant les diagrammes et devront être reçus par le président du programme au plus tard le 31 juillet 1987. Un volume sera préparé et distribué aux participants. Les articles et les résumés peuvent être en français ou en anglais.

SCIENTIFIC PROGRAM COMMITTEE REPORT FOR THE 20TH ANNUAL CMOS CONGRESS

The theme of the 20th Annual CMOS Congress in Regina was "Drought, The Impending Crisis?" and the Congress was held jointly with the Canadian Hydrology Symposium. G.A. McKay gave the opening keynote presentation on "Drought, A Global Perspective" which was well illustrated and very informative. As the invited speaker in oceanography, Dr. K.L. Denman of IOS reviewed the role of phytoplankton as passive, non-conservative tracers for studies of ocean circulation. With the increasing recognition that studies of the physical, biological and chemical aspects of oceanography (and meteoeorloy) need to be done in concert, this presentation was not only excellent but very timely. Prof. M. Schlesinger of Oregon State University, the other CMOS invited speaker, reviewed the capabilities of climate circulation models to predict the changes in atmospheric conditions for CO2 induced climate changes. The importance of the role of the oceans in moderating and delaying these changes was stressed. These three presentations made a fine introduction to the 16 sessions and 79 papers that followed. Approximately one-third of the papers were on oceanographic topics. Although the number of papers was lower than recent congresses, the quality of the presentations remained high and provided for many interesting and informative sessions.

Two sessions deserve special mention as examples for future congresses. One session dealt with the first reports on the just successfully completed Canadian Atlantic Storms Program (CASP). The preliminary results and overviews presented imply several years of interesting sessions in the future and demonstrate the benefits of coordinated, interdisciplinary research programs. CMOS, through its Scientific Committee, played a major role in bringing this program to fruition. The other session was organized by Prof. L. Mysak around the program MOIST (Meteorological and Oceanographic Influences on Sockeye Tracks). This type of focussed session is to be encouraged at future congresses.

Having our Congress jointly with the CHS gave CMOS attendees an opportunity to attend hydrology sessions and vice-versa. Actually several papers on the CHS program wee by CMOS members. This type of interaction will hopefully continue.

As with last year's Congress in Montreal, we asked for, and generally received, "camera#ready" abstracts from authors and this, plus the hard work of Ed Truhlar, resulted in the Abstracts Volume being produced in a very short time. We also received a grant from MSERC to help pay for the travel costs of invited speakers.

ADVERTISING RATES - CMOS NEWSLETTER

The following rates are based on 8.5 X 11.5 inch (21.6 X 27.9 cm) black and white camera ready copy. Additional charges apply where typesetting, artwork, or photographic plates are required. Distribution per issue is approximately 1100.

RATES PER ISSUE:

Type of advertisement	Full Page	1/2 Page	1/4 Page
Commercial	\$150.00 \$100.00	\$80.00	\$50.00 \$40.00
Position Vacancy * Employment Wanted	\$100.00	0,744,375,00	\$40.00
(members only)		FREE	

* Discounts: Corporate and Sustaining members advertisements at the Position Vacancy rate.

Forward advertisements To:

Mr. C. F. Mac Neil Editor, CMOS Newsletter Atmospheric Environment Service 1496 Bedford Highway Bedford, Nova Scotia B4A 1E5

Call for Papers

Tenth Conference on Probability and Statistics in Atmospheric Science, October 1987, Alberta, Canada

The Tenth Conference on Probability and Statistics in Atmospheric Science will be held jointly with the Seventh Conference on Hydrometeorology and the Eleventh Conference on Weather Modification in October 1987 in Alberta, Canada. The program is being arranged by the AMS Committee on Probability and Statistics.

Papers are requested on all aspects of probability and statistics in atmospheric science. Papers dealing with statistical inference, particularly in hydrology, weather modification, and climatology will be key elements of this conference. In addition, papers describing new statistical techniques and applications of new and existing techniques, including work on forecasting, the utility and impact of forecasts, signal detection and climate analysis are encouraged.

Titles and reviewer's abstracts of 200 words or less should abe sent no later than March 15, 1987 to Program Chairman Francis W. Zwiers, Canadian Climate Centre, 4905 Dufferin Street, Downsview, Ontario, Canada, M3H 5T4 (telephone: (416) 667-4963). The abstracts should contain the complete mailing address and the telephone number of the lead author. Notification of the acceptance of the papers will be completed by April 15, 1987.

A preprint volume will be prepared and distributed at the Conference. Camera-ready manuscripts of no more than 8 pages, including diagrams and photographs, must be received at AMS Headquarters no later than June 15, 1987. Instructions and special typing paper will be furnished to authors well before that date. Page charges will be assessed to help defray printing costs.

Further enquiries should be directed to the $\mbox{Program Chairman.}$

Notice to all Members

Mail Ballot on Changes to CMOS Constitution and By-Laws

The CMOS 1986 Annual General Meeting (Regina, June 4, 1986) adopted a revised Constitution and By-Laws as printed in the February 1986 Newsletter (Vol.14,No.1). The Meeting also approved a number of corrections to this new version as printed on page 1 of the June 1986 Newsletter (Vol 14, No.3) except for one which was inadvertedly omitted, namely the re-insertion of the category of Sustaining Members and their rights to receive all CMOS publications [By-Law 1a) and b)].

As required by Article 5 e) of the Constitution, the approval of the new version by the Department of Consumer and Corporate Affairs was requested and was given on June 27,1986. However, the Department requested that the Society make at the earliest possible opportunity a few changes which are required in accordance with the Canada Corporations Act. In one case they correct an oversight (indicating the numbers of Councillors-at Large) and in two cases they include references required by the Act.

In accordance with Article 5 b) of the Constitution, the CMOS Council, at its 2nd (1986/87) Meeting (Bedford, Sepember 9, 1986) agreed to seek the approval by Members of the changes required by the Department of Consumer and Corporate Affairs by means of a Mail Ballot. All Members are requested to fill out the ballot form and send it to CMOS Headquarters. Only those ballots which are received by January 15, 1987. will be counted.

MAIL BALLOT ON CHANGES TO CONSTITUTION AND BY-LAWS

I approve	(Mark appropriate box by X)
I do not approve	

the changes to the Constitution and By-Laws requested by the Department of Consumer and Corporate Affairs as indicated by underlining in the version of the Constitution and By-Laws printed in this Newsletter of*

Send to: CMOS-151 Slater, Suite 903 Ottawa, Ontario K1P 5H3 DO NOT SIGN BUT GIVE YOUR NAME AND ADDRESS ON THE ENVELOPE AND MARK THE ENVELOPE: MAIL BALLOT

Avis à tous les membres

Bulletin de vote par courrier sur les changements apportés à la Constitution et aux règlements de la SCMO

Lors de sa réunion générale annuelle de 1986 (Regina, le 4 juin 1986), la SCMO a adopté une Constitution et des règlements révisés, tels que parus dans le bulletin de nouvelles de février 1986 (vol. 14, nº 1). Elle a aussi approuvé un certain nombre de corrections à cette nouvelle version, telles que mentionnées à la page l du bulletin de nouvelles de juin 1986 (vol. 14, nº 3) sauf une qui a été oubliée par inadvertance, soit la réinsertion de la catégorie des membres de soutien et leur droit à recevoir toutes les publications de la SCMO [règlement l a) et b)].

Comme le mentionne l'article 5 e) de la Constitution, l'approbation de la nouvelle version par le ministère de la Consommation et des Corporations a été demandée, et elle a été donnée le 27 juin 1986. Toutefois, le ministère a demandé que la Société effectue, aussitôt que possible, les quelques changements requis par la Loi sur les corporations canadiennes; un changement porte sur un oubli concernant le nombre de conseillers, et deux changements concernent des références exigées par la Loi.

Selon l'article 5 b) de la Constitution, le conseil de la SCMO, à sa deuxième réunion de 1986-1987 à Bedford, le 9 septembre 1986, a convenu de soumettre à l'approbation des membres les changements demandés par le ministère de la Consommation et des Corporations, au moyen de vote par courrier. On demande à tous les membres de remplir le bulletin de vote et de le faire parvenir à l'administration centrale de le SCMO. Seuls les bulletins reçus au plus tard le 15 jan, 1987, seront comptés.

BULLETIN DE VOTE PAR COURRIER SUR LES CHANGEMENTS APPORTÉS À LA CONSTITUTION ET AUX RÈGLEMENTS

J'approuve		
Je n'approuve pas	(Marquer d'un X la case appropriée)	
	et aux Règlements demandés par le Corporations tels que mentionnés dans Règlements publiée dans le Bulletin de	

Veuillez faire parvenir votre bulletin de vote à:

SCMO 151, rue Slater, suite 903 Ottawa (Ontario) K1P 5H3

Veuillez ne pas signer, mais inscrivez votre nom et votre adresse sur l'enveloppe de retour ainsi que la mention "bulletin de vote".

Present Version

CONSTITUTION

ARTICLE 4 - The Executive and Council

The Executive of the Society consists of the President, the Vice-President, the Treasurer, the Corresponding Secretary, and the Recording Secretary. It also includes the Executive Director and Publications Business Manager who are exofficio and without voting privileges. The Council of the Society consists of the Executive, the immediate Past President, the Councilors-at-Large, and the Chairmen of the Centres.

ARTICLE 5 - Changes to the Constitution or By-

b) Members shall vote on the proposed changes either by mail ballot or at a general meeting as decided by Council. In the case of a vote at a general meeting, the changes shall be sent to members at least two months prior to the meeting. Mail ballots shall include a notice that only ballots received by the Corresponding Secretary before a specified counting date will be counted. The counting date shall be at least two months after the mailing of ballots.

BY-LAWS

BY-LAW 10 - Election of Council

a) The elected officers to council are the President, the Vice-President, the Treasurer, the Corresponding Secretary, the Recording Secretary, and the Council at Large. Only members in good standing are eligible to hold office in the Society.

BY-LAW 14 - Council

d) Council may meet and transact business by telephone conference call or other means, when members are unable to assemble in one place.

Proposed Version

CONSTITUTION

Article 4 - The Executive and Council

The Executive of the Society consists of the President, the Vice-President, the Treasurer, the Corresponding Secretary, and the Recording Secretary. It also includes the Executive Director and Publications Business Manager who are exofficio and without voting privileges. The Council of the Society consists of the Executive, the immediate Past President, the https://linearch.nih.google.com/ Councillors-at-Large, and the Chairmen of the Centres.

ARTICLE 5 - Changes to the Constitution or By-Laws

b) Members shall vote on the proposed changes either by mail ballot, except where otherwise required by the Canada Corporations Act,or at a general meeting as decided by Council. In the case of a vote at a general meeting, the changes shall be sent to members at least two months prior to the meeting. Mail ballots shall include a notice that only ballots received by the Corresponding Secretary before a specified counting date will be counted. The counting date shall be at least two months after the mailing of the ballots.

BY-LAWS

BY-LAW 10 - Election of Council

a) the elected officers to Council are the President, the Vice-President, the Treasurer, the Corresponding Secretary, the Recording Secretary, and the https://doi.org/10.1016/j.ce/html///.de/html//

BY-LAW 14 - Council

d) Council may meet and transact business by telephone conference call or other means, permitting all attendees participating in the meeting to hear each other, when members are unable to assemble in one place.

Présente version

ARTICLE 4 - Le bureau et le counseil d'administration

Le bureau d'administration de la Société se compose d'un président, d'un vice-président, d'un trésorier, d'un secrétaire-correspondant, et d'un secrétaire d'assemblée. Le bureau d'administration inclut le directeur exécutif et le directeur commercial des publications qui sont membrers à titre d'office et sans privilege de vote. Le conseil d'administration de la Société se compose des membres du bureau d'administration, du président sortant, des membres à personnel du conseil d'administration, et des présidents des Centres.

ARTICLE 5 - Modification de la Constitution ou des règlements

b) Dépendant de la décision du counseil, les membres votent soit par bulletin de vote par courrier soit à l'assemblée générale. Dans le cas d'un vote à l'assemblée générale, les modifications doivent être distribuées aux membres deux mois au moins avant la tenue de l'assemblée. Les Bulletins de vote expédiés par courrier doivent inclure un avis indiquant que seuls les Bulletins de vote reçus par le secrétaire-correspondant avant une date limite seront comptés. La date du dénombrement du scrutin devra être fixée à, au moins, deux mois après la date de l'envoi des Bulletins de vote.

REGLEMENT 10 - Election du conseil d'administration

a) Les membres du conseil d'administration élus sont le président, le vice-président, le trésorier, le secrétaire-correspondant, le secrétaire d'assemblée et le membre à title personnel du conseil d'administration. Seuls les membres en bonne et due forme sont éligibles aux postes de la Société.

REGLEMENT 14 - Le conseil d'administration

d) Lorsque les membres sont incapables de se réunir dans un lieu donné, le counseil d'administration peut se réunir et mener ses affaire par conférence téléphonique ou en utilisant tout autre moyen.

Version proposée

ARTICLE 4 - Le bureau et le counseil d'administration

Le bureau d'administration de la Société se compose d'un président, d'un vice-président, d'un trésorier, d'un secrétaire-correspondant, et d'un secrétaire d'assemblée. Le bureau d'administration inclut le directeur exécutif et le directeur commercial des publications qui sont membrers à titre d'office et sans privilege de vote. Le conseil d'administration de la Société se compose des membres du bureau d'administration, du président sortant, des trois counseillers, et des présidents des Centres.

ARTICLE 5 - Modification de la Constitution ou des règlements

b) Dépendant de la décision du counseil, les membres votent soit à l'assemblée générale soit par bulletin de vote par courrier sauf, dans ce dernier cas, si la loi sur les corporations canadiennes le stipule autrement. Dans le cas d'un vote à l'assemblée générale, les modifications doivent être distribuées aux membres deux mois au moins avant la tenue de l'assemblée. Les Bulletins de vote expédiés par courrier doivent inclure un avis indiquant que seuls les Bulletins de vote reçus par le secrétaire-correspondant avant une date limite seront comptés. La date du dénombrement du scrutin devra être fixée à, au moins, deux mois après la date de l'envoi des Bulletins de vote.

REGLEMENT 10 - Election du conseil d'administration

a) Les membres du conseil d'administration élus sont le président, le vice-président, le trésorier, le secrétaire-correspondant, le secrétaire d'assemblée et les trois counseillers. Seuls les membres en bonne et due forme sont éligibles aux postes de la Société.

REGLEMENT 14 - Le conseil d'administration

d) Lorsque les membres sont incapables de se réunir dans un lieu donné, le counseil d'administration peut se réunir et mener ses affaire par conférence téléphonique ou en utilisant tout autre moyen permettant à tous les participants de s'entendre mutuellement.

NOTICE AND CALL FOR PAPERS

SIXTH INTERNATIONAL SYMPOSIUM ON GLOBAL TROPOSPHERIC CHEMISTRY

The Sixth International Symposium on Global Tropospheric Chemistry will be held in Peterborough, Ontario from August 23-27, 1987. This symposium, sponsored by the IAMAP Commission on Atmospheric Chemistry and Global Pollution, will deal primarily with global distribution and trends of trace gases and aerosols which play important roles in tropospheric chemical cycles. The following topics will also be of interest:

- fluxes to the troposphere from the biosphere,
- chemical transformations in the global troposphere,
- removal processes and rates in remote regions, and
- modeling the global tropospheric chemical system.

Papers on all chemical cycles are solicited, but there will be at least one special session on organic acids and related compounds in the troposphere.

The tentative deadline for submission of abstracts is 1 April 1987. Abstracts (in English or French) up to 300 words, single spaced, must include title, authors, affiliations and addresses. Papers will be selected for presentation at the symposium by the Program Committee on the basis of information contained in the abstracts. Please indicate you preference for an oral or a poster presentation.

Address correspondence to:

Dr. D.M. Whelpdale AES-DOE 4905 Dufferin Street Downsview, Ontario Canada M3H 5T4 (Tel: 416-667-4903)

AVIS ET APPEL DE COMMUNICATIONS

SIXIEME COLLOQUE INTERNATIONAL SUR LA CHIMIE DE LA TROPOSPHERE DU GLOBE

Le sixième colloque international de chimie de la troposphère du globe se tiendra à Peterborough, en Ontario, du 23 au 27 aout 1987. Ce colloque, parrainé par la Commission d'étude de la chimie atmosphérique et de la pollution mondiale de l'AIMPA, traitera surtout de la distribution et de la tendance mondiales des aérosols et des gaz à l'état de traces qui jouent un role important dans les cycles chimiques de la troposphère. Voici d'autres subjects présentant de l'intéret:

- flux allant de la troposphère à la biosphère;
- transformations chimiques survenant dans la trosposphère du globe;
- processus et taux de retrait dans les régions reculées;
- modélisation du système chimique de la troposphére.

Nous sollicitons des communications sur tous les cycles chimiques, mais il y aura au moins une séance spéciale sur les acides organiques et les composés connexes de la troposphère.

Pour le moment, on a fixé au ler avril 1987 la date limite de soumission des résumés. Les résumés (en français ou en anglais), comptant jusqu'à 300 mots, à simple interligne, doivent indiquer le titre, les auteurs, les affiliations et les adresses. Le Comité du programme se fondera sur les renseignements renfermés dans les résumés pour choisir les communications qui seront présentées au colloque. Veuillez indiquer si vous préférez un exposé oral ou un exposé par affiche.

Adressez votre envoi à :

M. D.M. Whelpdale SEA-MDE 4905 Dufferin Street Downsview, Ontario Canada M3H 5T4 (No. de tél.: 416-667-4903)

NEWSLETTER SUBMISSIONS

The following summarizes the publishing schedule for future issues of the Newsletter. If possible the editor would appreciate receiving material in ELITE type print, 12 characters/inch, and set in columns 50 characters wide. For example set the margind at column 10 and at column 60.

DEAD			VOLUME	AND	IS	SUE
DEC.	19,	1986	DECEMBER	VOL	14	NO.6
FKB.	20,	1987	FEBRUARY	VOL	15	NO.1
FEB.	01,	1987	MAY	VOL	15	NO.2*
JUN.	19,	1987	JUNE	VOL	15	NO.3
AUG.	21,	1987	AUGUST	VOL	15	NO.4
OCT.	16,	1987	OCTOBER	VOL	15	NO.5
DEC.	18,	1987	DECEMBER	VOL	15	NO.6

* VOL 15 No.2 is the ANNUAL REVIEW and takes longer to prepare and print therefore the deadline is much earlier than for a regular issue.

Submissions should be sent to:

Mr C.F.Mac Neil Editor, CMOS Newsletter Atmospheric Environment Service 1496 Bedford Highway Bedford, Nova Scotia B4A 1E5

phone: (902) 835-9534

CALL FOR PAPERS

70th Canadian Chemical Conference and Exhibition*

Environmental Chemistry Division

SYMPOSIUM: Chemistry of acidic dry deposition:

Sampling,

analysis and interpretation of data.

Date: June 7-11, 1987

LOCATION: Université Laval, Québec

Québec, CANADA

THEMES: Measure and sampling networks

Physico-chemical analysis

Quality control/quality assurance

program

Physics of acidic dry deposition

Environmental effects

Abstracts will be received until December 15, 1986 and should be sent to: GHISLAIN JACQUES; Direction de la météorologie; Ministère de l'Environnement; 2360, chemin Sainte-Foy, Sainte-Foy, Qué.; CANADA; G1V 4H2; Tel.: (418) 644-3482.

Each abstract, not to exceed 300 words, is to be typed single spaced on a sheet of 216 mm by 279 mm (8.5 in. by 11 in.) paper with 25 mm (1-inch) margins. Clean, camera-ready copy with black type is required. Elite type (12 pitch) is preferred. The heading block should consist of the following items on successive lines:

a) The title in capital letters,

b) The name(s) of the author(s) in upper and lower case letters.

There should be a one-line space between the heading block and text. All lines, including the title, names and text, are to be typed left justified. In an accompanying covering letter, the authors should give their affiliation as they would like it to appear in the program that will be published for the Conference. Paper will be included in the Symposium, if appropriate. A period of 20 minutes will be allocated for each paper.

Commerical exhibits will be on display during the Conference. For further information, contact: **Monsieur Jean-Louis Lavoie**; Université Laval; Département de biochimie; Sainte-Foy, Qué; CANADA; G1K 7P4; Tel.: (418) 656-2965.. * Sponsored by Canadian Society of Chemistry

INVITATION A PRÉSENTER DES COMMUNICATION

70e Congrès de chimie du Canada et exposition*

Division de chimie environnementale

SYMPOSIUM: La chimie des dépôts acides secs:

échantillonnage, analyse et interprétation des données

DATE: 7 au 11 juin 1987

LIEU: Université Laval, Québec, Qué.

THÈMES: Mesure et réseaux de mesure

Analyse physico-chimique

Contrôle et assurance de qualité dans

les programmes de collecte Physique des dépôts acides secs Impact des dépôts acides secs sur

1'environnement

Faire parvenir un résumé de votre communication avant le 15 décembre 1986 à: GHISLAIN JACQUES; Direction de la météorologie; Ministère de l'Environnement; 2360, chemin Sainte-Foy; Sainte-Foy, Qué.; CANADA; GIV 4H2; Tél.: (418) 644-3482.

Chaque résumé ne doit pas dépasser 300 mots et doit être dactylographié à l'encre noire à interligne simple sur une feuille de 216 mm sur 279 mm (8,5 pouces sur 11 pouces) ayant une marge de 25 mm (1 pouce). La copie doit être propre et prête à être photocopiée. L'utilisation du caractère élite (12 frappes au pouce) est préférable. L'en-tête doit contenir les renseignements suivants sur des lignes successives:

a) le titre en lettre majuscules,

 b) le nom de l'auteur en lettres majuscules et miniscules.

On doit laisser un espace d'un interligne simple entre l'en-tête et le texte. Toutes les lignes, incluant le titre, le nom et le texte, doivent commencer à la marge. Les auteurs doivent inclure, dans une lettre jointe à leurs documents, leur affiliation telle qu'ils voudraient qu'elle apparaisse au programme qui sera publié par le Congrès. Les communications seront acceptées selon la pertinence des résumés. Chaque communication est limitée à 20 minutes.

Une exposition commerciale aura lieu pendant le Congrès. Pour de plus amples renseignements, veuillez contacter: Monsieur Jean-Louis Lavoie; Université Laval: Département de biochimie; Saint-Foy, Qué.; CANADA; G1K 7P4; Tél.: (418) 656-2965.

* Sous l'égide de la Société canadienne de chimie.

THE CSSS MEETS IN OTTAWA IN 1987

The thirty-third annual convention of the Canadian Society of Soil Science will take place at Carleton University in Ottawa, Canada from August 16th to 19th, 1987. The theme of the conference is Land Management in a Changing World. technical program will consist of invited oral presentations by eminent scientists, along with volunteered papers and posters presentations. Papers will be accepted in either English or Exhibits of the latest available French. equipment, technology and information services will be readily accessible to the delegates. conference will be complimented by field trips related to the theme.

The conference committee will accept papers on any aspect of soil science and land management. Special themes being encouraged include:

- the impact of change on land management
- anthropogenic soils
- land use planning guidelines
- forestry, agriculture and environment interfaces
- soils and water conservation
- micro-computer applications

The Canadian Society of Soil Science is an organization of about 500 scientists committed to the orderly development and application of soil science. The 1987 conference is being hosted solely by CSSS.

For further information or to receive future mailings, please contact:

CSSS '87 Conference
Tour and Conference Centre
Commons Building
Carleton University
Ottawa, Ontario, Canada
KIS 5B7
Tel: 613-564-5510

NOW AVAILABLE FOR PURCHASE

The Artic Science and Technology Information System (ASTIS) is undertaking a major enhancement of its bibliographic database in the priority subjects of the Environmental Studies Revolving Funds (ESRF). The purpose of this enhancement, known as the ESRF/ASTIS Project, is to develop a database which will act as a central source of environmental and social information about the Canada Lands. The second and third of these publications are now available:

BIBLIOGRAPHY ON THE FATE AND EFFECTS OF ARTIC MARINE OIL POLLUTION, is 212 pages long, plus a 12 page introduction. Citations are listed by author, and the bibliography contains subject, geographic, title, and serial indexes. Cost is \$50.00 per copy. A handling charge of \$3.00 will be added to non-prepaid orders.

ICEBERGS: A BIBLIOGRAPHY RELEVANT TO EASTERN CANADIAN WATERS, is 277 pages long, plus a 12 page introduction. Citations are listed by author, and the bibliography contains subject, geographic, title, and serial indexes. Cost is \$55.00 per copy. A handling charge of \$3.00 will be added to non-prepaid orders.

AVAILABLE FROM:

ASTIS
ARCTIC INSTITUTE OF NORTH AMERICA
UNIVERSITY OF CALGARY
2500 UNIVERSITY DRIVE NW
CALGARY, ALBERTA
T2N 1N4

IS THE UNITED STATES HEADED FOR HURRICANE DISASTER?

A Statement of Concern by the American Meteorological Society as adopted by the Council on January 12, 1986

We are more vulnerable to hurricanes in the United States now than we have ever been in our history. Millions of people have been attracted to our beautiful coasts, exposing a large population to the threat from hurricanes and the storm surge associated with them. Unfortunately, the rate of improvement in achieving greater forecast lead times is not keeping pace with the time requirements for evacuating an ever-increasing coastal population. This situation demands increased emphasis on both meteorological research to improve predictions and on emergency plans for evacuation of populations threatened by storms.

During the past decade, a number of comprehensive evacuation studies by emergency management authorities have been completed and the results are alarming. It would take 20 to 30 hours to evacuate some of the most hurricane-prone locations, including the Galveston Bay area, the Tampa Bay area, the southwest Florida coast, the Florida Keys, and southeast Florida coast. Evacuation times for Corpus Christi, Texas, Beaumont, Texas and Charleston, South Carolina approach 15 hours. We do not even know the time required to evacuate our most vulnerable city, New Orleans, nor the coastal islands of New Jersey, which are a mecca for hundreds of thousands of summertime vacationers. Studies of these areas have yet to be completed, but it is estimated that their evacuation times are similar to that for the Galveston Bay area. Coastal residents find it difficult to believe that evacuation times are as great as indicated by comprehensive studies. According to a survey conducted a few years ago of 300 coastal residents, the median estimated time to evacuate the Sarasota, Florida, coastal area was one and a half hours. In reality, detailed analysis reveals that it would take 16 hours to move threatened residents to safety.

Traditionally, the goal of the National Hurricane Center has been to provide 12 daylight hours of warning time for evacuation. Obviously, the time required to evacuate many coastal areas far exceeds the lead time of warnings. If we attempt to provide warning lead times that are compatible with evacuation studies, substantial unnecessary evacuations will occur because of the inherent uncertainly in long-range hurricane prediction.

Consider the problem that arises when an intense hurricane threatens an area that requires 24 hours to evacuate. If a perfect forecast could be made, the length of the coastal region that requires evacuation would normally be less than 100 miles. However, the mean error in predicting the position of a hurricane 24 hours in advance is slightly more than 100 miles. To provide for this uncertainty in the evacuation decision, approximately 300 miles of coast would have to be evacuated. Consequently, two-thirds of those who evacuated would have done so unnecessarily. Stated another way - for every three times evacuation is advised, only once will it prove necessary. This raises the issue of credibility. How many times will people evacuate unnecessarily before they lose faith in the warnings and ignore the advice to evacuate?

Hurricanes occasionally behave in unexpected ways that preclude the issuance of warnings in sufficient time to complete evacuation. Hurricane Alicia in 1983 had the potential to produce a catastrophe. It formed as a weak storm in the Gulf of Mexico in an environment that did not appear favorable for strengthening. Local officials in Galveston decided against complete evacuation of coastal areas. When Alicia strengthened significantly in the 18 hours before landfall, it was too late to tatally evacuate the threatened area. Large loss of life was averted by the presence of a 15-foot seawall that was built to protect the city following the record hurricane disaster of 1900 that claimed 6000 lives. Few coastal locations have such massive seawalls. If a similar situation occurs in an unprotected area, resulting casualties could number in the hundreds or thousands.

Unanticipated acceleration of a hurricane causes similar warning problems. In 1938, a major hurricane was just east of the Bahamas. It accelerated northwestward and crossed Long Island, New York, only 30 hours later, at a speed approaching 60 miles per hour. Hurricane Hazel struck North Carolina at 50 miles per hour in 1954. Little warning preceded the arrival of these storms, and even today it might not be possible to provide more than 6 hours warning in similar circumstances.

One emergency option that should be studied is the concept of vertical evacuation (moving to the upper floors of substantial multi-story buildings). Even though it was introduced nearly 15 years ago, vertical evacuation has not been thoroughly evaluated. Consequently, not one community has chosen to adopt this as part of its precedures.

On the average, two hurricanes strike the United States every year. During the past few decades, however, the number of severe hurricanes that has affected the Unites States has been below average. Fewer hurricanes crossed our coastlines during the 1970s than during any other decade of the century. More than 35 years have passed since the Florida peninsula was hit by a devastating storm. Ironically, this fortunate anamaly only adds to the current warning problem. Recent studies show that more than 80 percent of the 40 million residents of counties bordering the Atlantic Ocean and Gulf of Mexico have never experienced a major hurricane.

Our vulnerability was particularly evident in 1985 when six hurricanes and two tropical storms struck the United States coastline. Although the sustained winds of these storms at landfall were not as strong as those of the most intense hurricanes, there were 37 deaths and property damage exceeded \$4 billion. Stronger winds at the time of landfall could only increase these figures.

Technology has improved our capability to observe hurricanes and to display this information, for example, on television; forecasting hurricane motion and intensity still requires much research in order to achieve the skill necessary to adequately support the warning and evacuation components of the problem.

There is an urgent need in this nation to renew our efforts in dealing with the hurricane problem, including

 Increasing research and development efforts focused directly on the hurricane prediction problem.

 Completion of comprehensive evacuation studies for the entire coastline to determine the magnitude of the United States hurricane

problem.

 Development, by coastal communities, of emergency procedures to be initiated should a meteorological surprise occur which does not permit adequate lead time for evacuation.

4) Encouragement of governments at the local, state, and federal levels to adopt realistic growth-management regulations that properly consider the hurricane evacuation problem.

- 5) Development of objective decision-making techniques that will allow government officials to knowledgeably consider the uncertainties in the hurricane warnings when formulating "action" decisions.
- 6) Development of hurricane education programs that inform people of potential dangers, dispel misconceptions, and permit the public to derive maximum benefit from forecasts and warnings.

This statement is a plea for the protection of the lives and property of United States citizens. If we do not move forward quickly in seeking solutions to the hurricane problem, we will pay a severe price. The price may be thousands of lives.

CMOS AND OTHER COMING EVENTS OF INTEREST TO MEMBERS

ORILLIA, ONTARIO	Nov	17	1986	=	Nov	20	1986	FOREST CLIMATE '86: SYMPOSIUM/WORKSHOP ON CLIMATE APPLICATIONS IN FOREST RENEWAL AND PRODUCTION
LINDAU, (FEDERAL REPUBLIC OF GERMANY)	Apr	6	1987	-	Apr	10	1987	SIXTEENTH NATO/CCMS INTERNATIONAL TECHNICAL MEETING ON AIR POLLUTION MODELLING AND ITS APPLICATION
LAKE TAHOE CALIFORNIA, U.S.A.	Apr	27	1987	2	Apr	30	1987	9TH CONFERENCE OF FIRE AND FOREST METEOROLOGY
U.OF ALBERTA EDMONTON, CANADA	Jun	4	1987	9	Jun	6	1987	INTERNATIONAL SYMPOSIUM ON COLD REGIONS HEAT TRANSFER
QUEBEC, QUEBEC CANADA	Jun	7	1987		Jun	11	1987	70th CANADIAN CHEMICAL CONFERENCE AND EXHIBITION (Chemistry of acidic dry deposition)
ST JOHN'S NEWFOUNDLAND	Jun	16	1987		Jun	19	1987	21ST CMOS/SCMO ANNUAL CONGRESS (Predictability in the Atmosphere and the Ocean)
VANCOUVER, B.C.	Aug	9	1987	8	Aug	22	1987	XIX GENERAL ASSEMBLY OF THE INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS
VANCOUVER, B.C.	Aug	9	1987	-	Aug	25	1987	IAHS WORKSHOP ON "SPATIAL VARIABILITY ANS REPRESENTATIVENESS OF HYDROGEOLOGICAL PARAMETERS" (IUGG GENERAL ASSEMBLY)
VANCOUVER, CANADA	Aug	9	1987	×	Aug	22	1987	IAHS SYMPOSIUM ON "FOREST HYDROLOGY AND WATERSHED MANAGEMENT IUGG GENERAL ASSEMBLY
OTTAWA, ONTARIO CANADA	Aug	16	1987	-	Aug	19	1987	THIRTY-THIRD ANNUAL CONVENTION OF THE CANADIAN SOCIETY OF SOIL SCIENCE (Theme: Land Management in a Changing World)
HAMBURG FED. REP. GERMANY	Sep	23	1987	ů,	Sep	29	1987	4TH INTERNATIONAL CONGRESS ON THE HISTORY OF OCEANOGRAPHY
HALIFAX, N.S. CANADA	Sep	28	1987	9	0ct	1	1987	CONFERENCE AND EXPOSITION THE OCEAN - AN INTERNATIONAL WORKPLACE
ALBERTA CANADA	Oct	1	1987	,	Oct	30	1987	TENTH CONFERENCE ON PROBABILITY AND STATISTICS IN ATMOSPHERIC SCIENCES
HALIFAX NOVA SCOTIA	Oct	14	1987	-	Oct	16	1987	SECOND AES/CMOS WORKSHOP ON OPERATIONAL METEOROLOGY (Theme: Marine Meteorology)